Honeywell

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CAR BLACK BOX
Beyond Security

User Manual

This user manual is subject to change without notice for product function improvement.

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CAR BLACK BOX Beyond Security

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SAFFY PRECAUTIONS

Video recording quality may be degraded by window tinting.

⚠ **Do not open/fix/alter this device**
Any customer alterations will void the Warranty

⚠ **Do not use any accessories other then those included with the recorder**
The use of any additional accessories will void the product warranty

⚠ **Do not connect the device directly to car' s battery**
Connecting the device directly to the car 's battery will void the product warranty.

⚠ **Use this product only under the recommended power guidelines**
Using this product in alternative power situation will void the product warranty and could result in fire

⚠ **Remove all substance from the lens, including the plastic film, that may affect the quality of the recording**
Any obstruction may degrade recording quality.

⚠ **DO not expose product under extreme temperatures (high or low)**
Extreme temperature can cause damage of the product. See the recommended temperature range.

⚠ **Do not operate product while driving**
Only operate in safe environments

⚠ **Only install this product within the recommended installation area**
It could result in poor GPS reception

⚠ **If product is physically damaged during a fatal accidents, it may not record any data**

⚠ **Check the product frequently to ensure that the camera angle is properly adjusted**
After violent force is applied to the vehicle or product, the camera angle may be altered resulting in poor image quality

⚠ **Do not spray automobile cleaning products directly to product**
Product will be damaged if directly exposed to cleaning products

∗ **If product has not been used for a long time, It can cause battery discharge of the vehicle or overheat.**

FEATURES

WDR (Wide Dynamic Range)

Unique ability feature to combine both low and high illumination in a singular image without any image loss and clear view of the image

Normal Recording

High qualified video recording of 2Mbps at 30fps within diagonal 120° front view

Emergency Recording

With G-sensor, Black Box automatically detects accidents or impacts and records & saves data of 15 seconds before & after the event

Manual Recording

Manual Recording Mode is intended for user to save images at discretion when necessary

Image Deletion in timely order

When the SD card is full with data, image is deleted in order from the oldest one.

Voice Recording

Embedded microphone records voice & sound. (on/off option)

Voice Guide

The setting status can be easily identified with embedded speaker

180° Camera Rotation

User can rotate Camera part 180° in order to record a front view or car interior

Video Play in PC

The saved video data can be played by exclusive PC viewer manager provided by Honeywell or Window media player.

COMPOSITION

Main body

Micro SD Memory (4GB)

Micro SD Reader

Cigar Jack Power

3M Square Tape

Cable Clips (5ea)

User Manual

Video Cable (Option)

SPECIFICATION

LIST	HBB-1000WN	HBB-1000WG	DESCRIPTION
GPS	Non	Embedded	Option
Camera	WDR CMOS Camera		180° Camera Rotation / WDR Image
Resolution	VGA / 640 X 480, 30fps		fps : frame per second
Video Compression	H.264		AVI format
View Angle	Front 120° (Diagonal)		Car indoor recording by camera rotation
3G-sensor	X, Y & Z axis Acceleration		
Recording Mode	Real-time / Event / Emergency Recording		Each 15 sec. Before & after event (total 30sec.)
Recording Memory	Micro SD Card (2GB ~ 16GB)		SDHC support
Recording time	3 hours / 4GB		640 X 480, 30fps, 2Mpps base
Voice Recording	Embedded microphone		ON/OFF
Voice Guide	Embedded speaker		
Power	DC12V ~ DC 24V		
PC Viewer S/W	Available		
Operating Temp.	-20°C ~ +70°C		
Operating Humidity	20% ~ 80%		
Storage Temp.	-30 °C~ +85 °C		

FEATURES & FUNCTIONS

INSTALLATION

① Insert micro SD card

② Sticking 3M square tape onto the bracket

③ Check the point to attach

④ Attach 3M square tape onto the product

⑤ Remove the protection film of the camera lens

⑥ Adjust the camera angle

⑦ Connect power jack

⑧ Arrange the lines with clips

PRODUCT MANUAL

BLACK-BOX OPERATION

Normal / Emergency Recording Setting

The recording mode is switched by long press of the button.

① In case of long press during the Normal recording

Stop Black Box operation
Start Black Box operation
Start Emergency recording ⇨ **Start 'Emergency Record'**

② In case of long press during the event recording

Start Black Box operation
Stop Black Box operation
Start Normal recording ⇨ **Start 'Normal Record'**

Recording End/Restart

The recording mode is stopped or restarted by short press.

① In case of short press during the Normal or Emergency recording

Stop Black Box Operation ⇨ **Stop 'Normal or Emergency Recording'**

② In case of short press at the Normal or Emergency recording

Start the Normal or Emergency recording ⇨ **Start 'Normal or Emergency Recording'**

RECORDING MODES

Normal Recording

①Red LED of REC button is ON during Normal recording.
②Recording data is saved per 1 minute base
③The duration of last recorded file can be less than 1 minute.

Emergency Recording

①REC LED is flickering in Blue during Stand-by mode for Emergency recording.
②If an accident or any impact occurs, the device automatically detects the accident by G-sensor and REC LED becomes Red with alert sound, and saves data as an event.
③Emergency mode records 15 sec. before & after the accident or any impact. (total 30 sec.)
④Data of emergency recording could be less than 30 sec., if previous mode was emergency recording mode as well.
⑤The data is recorded as follows when emergency mode occurs in a row.
- Total 20 sec. data is recorded when the event occurs in 5 sec. after the event occurs. (5 sec. before & 15 sec. after the event)
- Total 15 sec. data is recorded when the event occurs right after the completion of previous event (0 sec. before & 15 sec. after the event)

MANUAL RECORDING

①Push REC button for Emergency recording
②Recording time: total 3 min.

FIRMWARE UPDATE

①Format micro SD card using PC.
②Copy 'app.bin' file to the root directory of the memory card
③Inset micro SD card to the Black-Box.
④Supply power to the Black-Box
⑤Voice guide 'Black-Box is started'.
⑥Voice guide 'Firmware Upgrade is started'.
⑦Black-Box is automatically restarted after the firmware is upgraded.
⑧Firmware upgrade is completed once memory card format is finished and Normal recording is started

NOTE This product shuts off the power automatically by the accident during the Normal or event recording. For this, it enables to record 1~3 sec. just after that moment additionally.

INSTALLATION

Installation file is stored in the SD CARD Memory. If you want to install the Viewer program, you can use the offered Memory Card Reader.
We recommend you to format the SD CARD first time use for the Installation file take up the large volume of memory.

• **Install PRIVE file**

• **Main of install program**

System Requirement (OS)	Windows 7, Windows XP, Windows MCE, Windows 2003 Server, Windows 2000, Direct 9 or higher

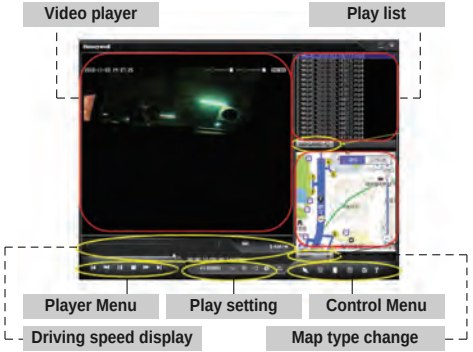
• **Driver 1**
Install mandatory utility

• **Driver 2**
Install mandatory utility

• **Install viewer program**

• **Shortcut button will be created when Setup is completed then finish the installation program.**

PC VIEWER DISPLAY



PLAYER MENU

① **Play previous file**
② **Rewind 3 sec.**
③ **Play**
④ **Stop**
⑤ **Fast Forward 3 sec.**
⑥ **Play next file**
⑦ **Pause**

SPEED DISPLAY

- **Play track**
  total play time/play status
- **Speed display**
  current driving speed

OTHER MENU

① **Voice setting**
② **Play speed setting**
③ **Brightness setting**
④ **Display flip**
⑤ **Save paused image (image capture)**

PC VIEWER

MANAGEMENT & SETTING

①**Open SD card folder**
②**Delete**
③**Copy SD card**
④**Save file**
⑤**SD card setting**
⑥**Help**

MEMORY CARD REFRESH / MAP LINK

- **SD Card Refresh**
- **MAP Display**
  (Constant movement based on the current location)
- **MAP Change**
  (Select Yahoo or Google)

FAQ

In case of voice guide "Please check memory card"

- ☑ Please check whether memory card is inserted properly.
- ☑ Please take memory card out and re-insert.
- ☑ Please format memory card before re-using.
- ☑ If the same problem still occurs after formatting, please replace memory card with another one.

In case of voice guide "System malfunction happens"

- ☑ Please check whether memory card is inserted properly.
- ☑ Please take memory card out and re-insert.
- ☑ Please format memory card before re-using.
- ☑ Please plug out and re-plug in the power.

In case the quality of recorded image is too blurry

- ☑ Please check whether the protection film on camera lens is removed.
- ☑ Please check whether camera lens is clean.
- ☑ Please check whether car window glass is clean.
- ☑ Please check whether there is any light reflection at camera lens.

In case product is not working

- ☑ Please check power supply spec. and re-plug in the power.
- ☑ Please check whether cigar jack fuse is working.
- ☑ Please check whether you are using power cable purchased from Honeywell.

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